

This lesson was funded by Minnesota Project Learning Tree and the Sustainable Forestry Initiative State Implementation Committee, and provided by the Minnesota Department of Natural Resources.

Who Cares for This Forest?

Overview

All kinds of indigenous people work in the forest—from foresters to loggers, from scientists to naturalists. Everyone depends on properly managed forests for recreation, essential products, and a healthy environment. This activity provides students with an overview of forest-related careers, especially those on lands currently managed by indigenous Ojibwe and Dakota.

Grades

3-6

Objectives

Students will 1) Explore a variety of jobs that are directly related to forest resources, 2) describe how various professionals work together to care for the forests, 3) describe how indigenous Minnesota values can affect how people do these jobs.

Subjects

Science, Social Studies

Key words

Careers, forestry, natural resources, treaties, indigenous

Background

Indigenous people in Minnesota work in and use the state's forests in many of the same ways as do other Minnesotans. This includes jobs such as foresters, loggers, wildlife biologists, interpretive naturalists, educators, and wildland firefighters. Indigenous people also use the forest to create various forms of art and enjoy leisure and life activities such as camping, hiking, hunting, and fishing.

Just *how* Minnesota's Dakota and Ojibwe people work in and use the forests differs from many other Minnesotans. Both Dakota and Ojibwe recognize the elements that make up our forests as living beings with spirits that must be respected and treated well. This means that cultural beliefs influence decisions about what to do, where to go, and how to do something. An Ojibwe logger may approach a timber stand with more than just profit on his/her mind. They may consider the life of each tree in the stand, how it has affected the creatures and other plants that live there, who has used that tree during its life, and how its removal can benefit their family or community. A Dakota educator may approach a lesson about climate change differently, considering how it has changed Minnesota's environment and how a changing climate affects their families' homes and resources they access and use.

Working on tribal lands and ceded territory adds yet another element that sets Ojibwe and Dakota peoples apart from other Minnesotans who work in and use forests. Indigenous forest managers follow specific regulations that allow Indigenous people to hunt, gather, fish, and do other traditional activities, while sometimes excluding non-tribal members from accessing the land for the same reasons.

A series of treaties with the federal government exchanged ceded territory land (desirable for settlement and extraction) and tribal land that Indigenous people were moved to, called reservations. Visit [The Why Treaties Matter website](http://www.treatiesmatter.org/treaties/land) (<http://www.treatiesmatter.org/treaties/land>) for more information.

Tribal agencies almost exclusively manage forests within tribal lands. Forests on ceded territories are often managed collaboratively, and may include special agencies such as the 1854 Treaty Authority.ⁱ The ability for each band of Ojibwe and Dakota to manage their own lands is an important aspect of their sovereignty.ⁱⁱ Sovereignty in the context of Native Americans in the United States refers to the right to govern themselves, including forming their own government, determining who can be a member, enacting legislation, and establishing a system of law enforcement and court systems to back up those laws.ⁱⁱⁱ This means that within tribal lands, one can expect regulations (on activities such as hunting, fishing, and harvesting resources such as wild rice) to differ from regulations on non-tribal lands in the rest of the state. Individual bands can regulate their specific needs as a group, the resources in their lands, and band's approach to resource management.^{iv}

Ojibwe and Dakota commonly practice stewardship and conservation. Many of their jobs require specific levels of higher education. Until recently, Native students had few options to pursue a degree that reflects cultural beliefs and practices into their approach. In the 2010s, the Bemidji State University expanded their sustainability sciences program to reflect Indigenous perspectives in their *Niizhoo-gwayakochigewin* Indigenous sustainability studies degree program.^v In 2020, the University of Minnesota in Duluth began offering a Master's of Science degree in Tribal Resource and Environmental Stewardship.^{vi} Both of these programs allow Native students the opportunity to bring their culture into their education and eventually their careers working in and conserving Minnesota's forests.

Getting Ready

Make copies of the student page, [Who Works in This Forest?](#) and gather magazines or appropriate websites for cutting out pictures for the collage (see Assessment).

Doing the Activity

1. Ask students if they know what a forest is, if they have either visited or seen pictures of a forest, or refer to your school forest if you have one. After making sure all students understand what a forest is, ask them if they think forests take care of themselves or if people need to take care of them. (People have taken care of forests for a long time, managing for wildlife habitat, timber, recreation, water quality, wildfire reduction, and many other purposes.) If so, what kind of work is necessary? (Examples might include: Loggers harvest trees, ecologists monitor invasive species, workers build trails, planters plant trees, etc.) Record their answers on the board.
2. Discuss with students how forests provide plant and animal habitats; paper and wood products; places for recreation; and air, soil, and water protection, or other [tree benefits](#). Explain that people must manage forests to enhance all of these. See if students can add more jobs to the list (in step 1) based on this discussion.

3. Pass out copies of the student page, and tell students the page will describe several people who do particular types of work. Students should read the brief descriptions and explain how each job is necessary in caring for the forest.
 - a. Alternative to step 3: Divide the students into nine groups. Assign one card per group. Tell each group to:
 - i. Read the card.
 - ii. Identify the job of the person in the card.
 - iii. Describe what the person in the card does.
 - iv. Describe why it is important to take care of the forest.
 - v. Discuss the perspectives that native communities bring to this job.
 - b. Then bring the class together and share work.

4. Now explain how indigenous Minnesotans may think about forests.

To introduce Ojibwe forest values, consider showing the video, [Ojibwe Treaty Rights: Connections to Land and Water](#)

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5. Go over the student page with students. Have them share their reasoning for how the jobs are necessary. By the end of the discussion, all students should realize that every job on the page is helpful in conserving and caring for forests. Also, use background information as you discuss some other kinds of people who work with forests.
6. Write the following occupations on the board: Logging truck driver, cardboard box maker, naturalist, wildlife biologist, artist, sawmill operator, campground manager, and garden supply store owner.
7. Ask students how each of those workers could benefit from having forests managed by the people they've learned about. Which workers depend on forests in some way to do their jobs? (all of them) Be sure students explain how each person depends on forests. As a group, discuss indigenous perspectives of the natural world as it relates to "taking care" of the forest.

Enrichment

Invite several people, especially indigenous people, whose jobs are related to the forest (forester, wildlife biologist, logger, sawmill worker, arborist, naturalist) to come and speak to your group. Have students prepare a list of questions to ask each person about the work he or she does. Here are some possible questions:

- Why did you choose this career?
- What kind of training do you need?
- What's your typical work day like?
- How many other people do you work with?
- What other kinds of people do you depend on to do your job?
- What kinds of clothes do you wear to work?
- What special equipment or technology do you use on the job and what does this equipment enable you to do?
- What are the most rewarding things about your job?
- What aspects of your job pose the biggest challenges?
- Would you recommend this career?
- If the speaker is a tribal member, ask how their tribal background influences how they approach their job.

Afterward, have students draw pictures or write stories about the people and their job. Consider having the students write thank you cards and letters to your guests.

As an alternative to a guest speaker, have students do internet search for careers related to the forest.

Assessment Opportunities

1. Have each person create a collage showing how people depend on forests. It can include pictures of forests, trees, streams, or rivers, wildlife, people living near forests, forest products, people using forests or products, and people working in forests. Have the students explain their collages to you verbally or in writing.
2. Have students select one forest-related job they would be interested in doing and explain why. Also, have them describe how the job is related to caring for the forest and how indigenous beliefs influence how the job could be done.

Student Page: Who Works in This Forest?

<p>Charlie</p> <p>Nothing helps you enjoy swimming in our cold northern lakes more than fighting a wildfire! Fires happen most often in the spring and hot, dry parts of the summer. Natural things like lightning can cause fires, but most fires are caused by people. I spend spring stationed in different parts of the state that have the highest fire risk. Sometimes we set controlled fires to limit the fuel that can cause a larger wildfire and decrease the damage from fire. My people, the Ojibwe, have done controlled burns for a very long time, to protect against wildfires and to clear and prepare land for planting the food we need to survive.</p>	<p>Why is this job important? Explain.</p>
<p>Kristen</p> <p>My classroom is the forest. As a science teacher at a school that uses an outdoor-classroom, my students need feel connected to nature through learning. My people, the Dakota, have relied on forest resources for as long as our history tells us. Although we have modern conveniences like grocery stores, it's important to know about these resources and what we all need to do to protect them for future generations.</p>	<p>Why is this job important? Explain.</p>
<p>Alex</p> <p>For me, being a lawyer was always more than just having a high-paying job. As an attorney specializing in Native American law, I work hard to protect the rights of the many Native people who call this place home, including protecting the rights of our non-human relatives such as water, air, trees, and animals. Most of my work focuses on making sure people honor treaty rights. I also make sure that development projects are thoroughly studied to determine the affect they will have on the people and the land.</p> <p>Learn more about Minnesota's 1854 Treaty: https://www.1854treatyauthority.org/about-us/who-we-are.html</p>	<p>Why is this job important? Explain.</p>

<p>Jamal Like all hydrologists (high-DRAHL-uh-jists), I'm interested in water. I look at water supplies, study watersheds and water cycles, and try to solve water pollution problems.</p>	<p>Why is this job important? Explain.</p>
<p>Haley I love numbers. And I get to deal with them each day: I'm a budget analyst. (A budget is a kind of outline of the money an organization expects to spend during a year.) I review the budgets people set up to make sure they're not spending too much money or spending money on the wrong things, and to make sure they're spending enough money on the right things.</p>	<p>Why is this job important? Explain.</p>
<p>Elinor How would you like to decide how a forest should be cared for? That's what I do all the time. I'm a forester. Being a forester can be tricky: I have to find the right balance between all kinds of needs, including the needs of people, plants, and animals.</p>	<p>Why is this job important? Explain.</p>
<p>Aaden When people ask me what I do, I tell them I have a dirty job. I'm a soil scientist. One thing I do is monitor soils to make sure they don't get smashed down, or compacted. I know that soil can absorb a lot of water from snowmelt and rain. But if the soil gets compacted, rainwater and snowmelt can rush right off, causing erosion problems.</p>	<p>Why is this job important? Explain.</p>
<p>Houa Are some living things more resistant to diseases and pests than others? Do some living things grow faster than others? Can these abilities be transferred to other living things, creating things that work better for them? These are the kinds of questions I'm trying to answer. I'm a geneticist (juh-NET-uh-sist).</p>	<p>Why is this job important? Explain.</p>

Connections to Science Standards

2P.4.2.2.1 Obtain information and communicate how Minnesota American Indian Tribes and communities and other cultures apply knowledge of the natural world in determining which materials have the properties that are best suited for an intended purpose.* (P: 8, CC: 2, CI: PS1, ETS1) *Examples of cultures may include those within the local context of the learning community and within the context of Minnesota.*

Emphasis of the practice is on obtaining, interpreting, and communicating information related to how various cultures have built materials suited for intended purposes according to their properties. Examples of materials may include instruments (Cedar for knockers and Black Spruce for poles) for ricing, birch bark for baskets or other containers for carrying water, and sinew for connecting parts of tools.

4E.4.2.2.1 Obtain and combine multiple sources of information about ways individual communities, including Minnesota American Indian Tribes and communities and other cultures use evidence and scientific principles to make decisions about the uses of Earth's resources.* (P: 8, CC: 4, CI: ESS3, ETS1) *Examples of cultures may include those within the local context of the learning community and within the context of Minnesota. Examples may include balancing the water, soil, wildlife, plant, and human needs to support sustainable use of resources.*

7L.4.2.2.1: Gather multiple sources of information and communicate how Minnesota American Indian tribes and communities and other cultures use knowledge to predict or interpret patterns of interactions among organisms across multiple ecosystems.

Connections to Social Studies Standards

19.6.3: Describe Minnesota and federal American Indian policy of the late nineteenth and twentieth centuries and its impact on Anishinaabe and Dakota people, especially in the areas of education, land ownership, and citizenship.

9.8.1 Explore career options, considering the personal economic impact of different choices (trade school, college, military) and how various types of workers contribute to the economy.

ⁱ 1854 Treaty Authority: [Who We Are](https://www.1854treatyauthority.org/about-us/who-we-are.html) <https://www.1854treatyauthority.org/about-us/who-we-are.html>

ⁱⁱ Why Treaties Matter: [Why Treaties Matter Today "Resource Protection"](http://treatiesmatter.org/exhibit/welcome/why-treaties-matter-today/#p91)
<http://treatiesmatter.org/exhibit/welcome/why-treaties-matter-today/#p91>

ⁱⁱⁱ National Conference of State Legislatures: [An Issue of Sovereignty](https://www.ncsl.org/research/state-tribal-institute/an-issue-of-sovereignty) <https://www.ncsl.org/research/state-tribal-institute/an-issue-of-sovereignty>

^{iv} University of Minnesota: [Interagency Information Cooperative Tribal Plans](http://iic.umn.edu/catalog/strategic-plans/tribal) <http://iic.umn.edu/catalog/strategic-plans/tribal>

^v Bemidji State University: [Niizhoo-gwayakochigewin](https://www.bemidjistate.edu/academics/departments/niizhoo-gwayakochigewin/)
<https://www.bemidjistate.edu/academics/departments/niizhoo-gwayakochigewin/>

^{vi} University of Minnesota Duluth: [Master of Tribal Resource and Environmental Stewardship](https://cla.d.umn.edu/departments/masters-programs/mtres)
<https://cla.d.umn.edu/departments/masters-programs/mtres>